

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A combination of an ion-modified polymeric material used in combination with a tissue adhesive, which comprises comprising expanded polytetra-fluoroethylene (ePTFE), polylactic acid, or polyglactin including a surface carbon or silicon as a constitutional element, and with at least a portion of the surface of which is modified by ion bombardment; and a tissue adhesive comprising fibrin glue.

2. (Canceled)

3. (Canceled)

4. (Currently Amended) The polymeric material combination according to claim 1 wherein the ~~modification~~ by ion bombardment is carried out by irradiation with ions at a dose (ϕ) of $1 \times 10^{12} \leq \phi \leq 1 \times 10^{16}$ ions/cm².

5. (Currently Amended) The polymeric material combination according to claim 1 which is used for comprising an artificial dura mater, and an artificial blood vessel, a patch used for the heart or blood vessel, or a surgical suture.

6. (Currently Amended) A method for producing the a combination of an ion-modified polymeric material and a fibrin glue of claim 1, which is characterized in at least comprising irradiating at least a portion of the a surface of the a polymeric material comprising carbon or silicon as a constitutional element is irradiated expanded polytetra-fluoroethylene (ePTFE), polylactic acid, or polyglactin with ions at a dose (ϕ) of $1 \times 10^{12} \leq \phi \leq 1 \times 10^{16}$ ions/cm²; and applying the fibrin glue to the irradiated polymeric material.

7. (Currently Amended) A method for improving ~~the~~ affinity with a fibrin glue of a polymeric material comprising carbon or silicon as a constitutional element ~~with a tissue adhesive, which is characterized in that~~ comprising irradiating at least a portion of ~~the a~~ surface of the polymeric material ~~is irradiated with ions at a dose (ϕ) of $1 \times 10^{12} \leq \phi \leq 1 \times 10^{16}$ ions/cm³ to form an ion-modified polymeric material; and applying the fibrin glue to~~ the irradiated at least a portion of a surface of the polymeric material.

8. (New) The method according to claim 7 wherein the ion-modified polymeric material includes a non-irradiated portion and the non-irradiated surface is placed into contact with dura mater.

9. (New) The method according to claim 7 wherein the polymeric material is an artificial dura mater, an artificial blood vessel, a patch for the heart or blood vessel, or a surgical suture.

10. (New) The method according to claim 7 wherein the material comprising carbon or silicon as a constitutional element comprises expanded polytetra-fluoroethylene (ePTFE), polylactic acid, or polyglactin.

11. (New) The method according to claim 7 wherein the polymeric material is an artificial dura mater.

12. (New) The method according to claim 7 wherein the irradiating at least a portion of a surface of the polymeric material comprises irradiating with ions at a dose (ϕ) of $1 \times 10^{12} \leq \phi \leq 1 \times 10^{16}$ ions/cm².

13. (New) The method according to claim 12 wherein the irradiating at least a portion of a surface of the polymeric material comprises irradiating with ions at a dose (ϕ) of $1 \times 10^{13} \leq \phi \leq 1 \times 10^{15}$ ions/cm².

14. (New) The method according to claim 12 wherein the ions include H^+ , He^+ , C^+ , N^+ , Ne^+ , Na^+ , N_2^+ , O_2^+ , Ar^+ , Kr^+ , and Xe^+ .

15. (New) The method according to claim 6 wherein the irradiating at least a portion of a surface of a polymeric material comprises irradiating with ions at a dose (φ) of $1 \times 10^{12} \leq \varphi \leq 1 \times 10^{16}$ ions/cm².